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 **Renewing America**
Progress Report and Scorecard



Road to Nowhere



Failing U.S. Transportation Infrastructure

Updated January 2016

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Road to Nowhere: Federal Transportation Policy

INTRODUCTION

The United States has a transportation infrastructure funding problem. The way the federal government raises money to pay for highways and transit no longer works, leading to budget shortfalls and underinvestment in infrastructure. Drivers pay a federal gas tax, with those revenues placed in trust funds dedicated solely to pay for highway, roads, and transit. But the gas tax is not producing as much revenue as it did in the past, and Congress has struggled to find a solution for plugging the gap. Congress has either resorted to multimonth patches or used funding gimmicks to try to close the shortfalls. Since 2002, highway and transit funding has been declining in real terms for all levels of government, and the biggest drop-off is at the federal level.

The United States should be spending more to improve and expand its transportation infrastructure, but instead barely spends enough to maintain the existing network. According to surveys, the quality of U.S. roads and transit is mediocre compared with other peer countries in the Group of Seven (G7). Although road and bridge conditions have actually been improving over time, capacity has not expanded as fast as population growth or miles driven. Congestion is now twice as bad as it was in the early 1980s.

In the face of federal inaction, states and localities have raised their own gas and sales taxes to pay for transportation investments. Politicians from across the political spectrum have supported using more public-private partnerships (P3s) to take some of the burden off the public sector. But private financing only works for a limited number of projects that have a high enough rate of return. Transportation infrastructure is a public good, and public dollars should make up the lion's share of the investment gap. Ultimately, the American people will have to spend more to pay for their infrastructure.

Other peer countries are doing a better job at securing funding to pay for multiyear investment plans. Even conservative governments in the UK and Canada have pushed through big long-term funding increases. And whereas the federal government hands out the vast majority of transportation dollars via formula without any accountability for how they are spent, other countries make more needs-based and strategic investment decisions—which is especially important when budgets are lean.

TRANSPORTATION INFRASTRUCTURE AND THE ECONOMY

Moving people and goods efficiently matters for the U.S. economy. Workers need to get to and from their jobs with ease and without wasting time sitting in traffic. Faster and more reliable on-time deliveries mean supply chains can be more dispersed and with less inventory standing time. All this energizes the economy. Infrastructure projects can also directly create jobs, especially for construction workers. With interest rates remaining at historic lows, an opportunity exists to marry short-term job creation with investments that will pay long-term benefits to U.S. economic competitiveness.

Compared with other kinds of public spending, infrastructure investment tends to have a larger stimulating effect on the economy, called a multiplier effect, and the effect is largest during a recession.¹ According to the Congressional Budget Office (CBO), of all the spending and tax relief components to the 2009 stimulus package, the infrastructure component delivered among the greatest boost.² One stimulus dollar spent on infrastructure was estimated to boost the economy by as much as just over two dollars.

WHERE THE UNITED STATES STANDS

QUALITY: AVERAGE AMONG PEERS

U.S. transportation infrastructure is mediocre compared with its peer competitors in the G7. For overall infrastructure quality, the United States used to rank fifth in the world; now it ranks sixteenth. Japan,

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Falling Behind



2015 ranking of U.S. infrastructure quality, worldwide

The United States lapped by eleven countries in the last decade:
UAE, Finland, Netherlands, Austria, Iceland, Japan, France, Portugal, Spain, Luxembourg, and Denmark

2002 ranking of U.S. infrastructure quality, worldwide

The United States has fallen in international rankings of infrastructure quality.



Highway miles traveled by U.S. drivers:
UP 96%



New highway miles to travel on:
UP 9%

1980
== TO ==
2013

New highway construction has not kept pace with highway use.

Germany, and France consistently rank higher than the United States in road and rail quality—at least according to surveys of their citizens who use them day to day.³ Only for airports does the United States come out on top among G7 countries. International comparisons are difficult and perhaps not totally fair; the United States has a much larger geographic area to cover and lower population densities to serve than most other advanced countries. Globally, it has the most paved roads, rail tracks, and airports.⁴

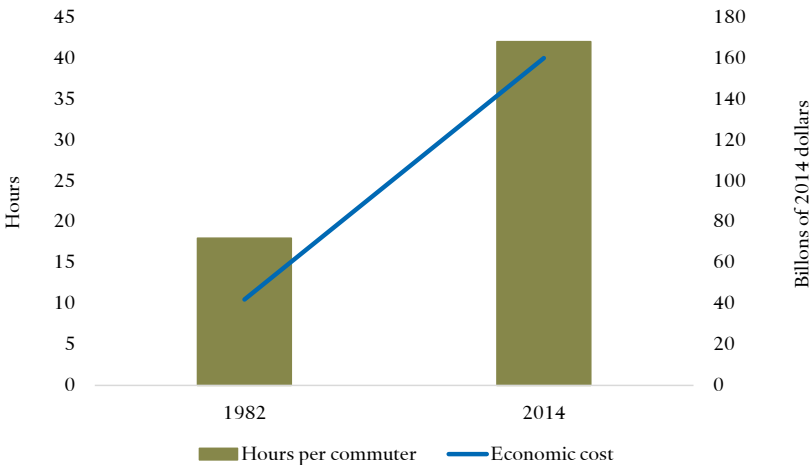
For surface transportation like roads, highways, and transit—where roughly 90 percent of all American travel-miles occur and where 85 percent of federal transportation funding is spent—government monitors suggest conditions are not getting worse.⁵ Between 2000 and 2010, average pavement conditions actually improved and driving fatality rates declined. The number of deficient bridges has been decreasing since the 1970s, though future repairs may not go as smoothly as in the past. The easy fixes have been crossed off the list, but several tricky, giant, and expensive bridges—like the Tappan Zee Bridge near New York City and the Columbia River Bridge near Portland, Oregon—are in urgent need of repairs.

Even if maintenance is up to date, capacity is not expanding as quickly as it should. Since 1980, the U.S. population has grown four times faster and vehicle miles traveled have grown ten times faster than new lane construction.⁶ The average American is driving slightly less than ten years ago. But total miles driven in the country, which had gone down during the recession, hit record highs once again in 2015.⁷

Roads have become more congested. Compared with twenty years ago, the average American spends twice as much time, or forty-two hours a year, stuck in traffic (see figure 1).⁸ In the major metropolitan areas that fuel the nation's economy, traffic is far worse. In Washington, DC, each driver loses eighty-two hours a year in traffic. The annual cost to the economy in fuel, wear, and wasted worker time tallies to \$160 billion nationwide.

Some wild cards could see future capacity needs veer from the historical trend. The number of cars on the road could decrease if car-sharing services take off. Driverless or automated cars loaded with sensors may need less distance from other cars, squeezing more use out of existing capacity. Traffic sensors could relay information to these cars to send them along the most efficient route.

FIGURE 1. HOURS SPENT IN TRAFFIC PER COMMUTER PER YEAR AND ECONOMIC COST OF CONGESTION



Source: Texas A&M Transportation Institute and INRIX (2015).

Congestion and infrastructure wear are unlikely to ease up any time soon, however. Smart-growth proponents argue the solution to easing congestion is to change infrastructure planning and spending priorities; instead of paving more highways and roads, the government should encourage Americans to live in denser communities and use more public transit or ride-sharing schemes. The share of commuters using transit is the highest in fifty years. Most major U.S. cities, including notoriously car-dependent Los Angeles, are making massive new investments in public transit. But the reality is that expanding transit alone cannot be a solution. Transit remains a tiny fraction (roughly 1.5 percent) of all travel miles. Yet the U.S. population is expected to expand steadily for decades to come, most of it in the suburbs rather than urban cores. In the era of home shopping and Amazon Prime, trucking miles are projected to increase at twice the rate of passenger car miles, and multiton trucks do more damage to roads.⁹ Just to keep congestion at its current level, overall capacity in road and transit miles will have to be expanded at a faster pace than it is today.

SPENDING: SHOULD BE HIGHER

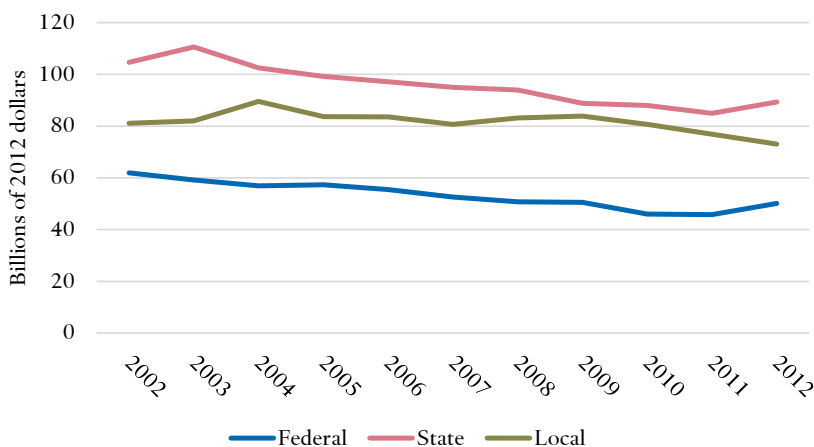
The United States should be spending more on its transportation infrastructure. Although internationally comparable data is poor, the best available evidence suggests that for the last twenty years the United States consistently spent less of its GDP on transportation infrastructure than its peers.¹⁰

No hard-and-fast rule applies to how much a country should apportion to infrastructure. Developing countries, such as China, which are building their initial transportation network, usually spend more than developed countries that have established networks. The U.S. federal government went on a spending blitz in the 1950s and 1960s, when the interstate highway system was first being built.

But government projections suggest current national spending levels are not enough to improve or expand the country's highways, bridges, and transit systems. Making all the investments that pass a cost-benefit analysis would require at least an additional 46 percent of spending.¹¹

Yet highway and transit spending trends have been going in the opposite direction, declining in real terms since 2002 for all levels of government (see figure 2).¹² The biggest drop-off has been at the federal level, by 15 percent. A substantial one-time boost in 2009 is attributable to

FIGURE 2. FEDERAL, STATE, AND LOCAL GOVERNMENT HIGHWAY AND TRANSIT SPENDING



Source: Pew Charitable Trusts (2014).

the federal stimulus package, but that was an exception to the underlying downward trend. Although the federal government only shoulders about 25 percent of highway and transit spending, it plays an outsize role for capital investment, which is usually for new construction—exactly the kind of construction most projections say the country needs and the kind of investments that have fallen off the most.¹³

FINDING THE MONEY

The way the federal government raises money to pay for surface transportation no longer works, leading to budget shortfalls. Drivers pay a federal gas tax, and those revenues are placed in trust funds dedicated solely to pay for highways, roads, and transit. But the gas tax is not producing as much revenue as it did in the past, and Congress has struggled to find a solution for plugging the gap.

Federal gas tax revenues have not been going up with infrastructure costs. The tax is set at an absolute level (18.4 cents per gallon) and is not indexed to inflation, so the real value has eroded over time. The only way to increase its value is if Congress votes to raise it—a rare and difficult feat. The last time Congress increased the gas tax was in 1993, and the real value of the gas tax has since fallen by 39 percent.¹⁴ Improved car and truck fuel efficiency, though better for the environment and energy security, also means lower gas tax revenues. Some cars do not use gas at all. Gas tax expenditures now routinely exceed revenues, and Congress has had to transfer money from general funds since 2009 to fill the gap. In 2015, highway and transit trust fund outlays exceeded gas tax revenues by 24 percent, amounting to a \$15 billion deficit.¹⁵

Congress for many years was unable to pass long-term funding bills. The federal government has traditionally set highway and transit policies and budgets through authorization laws that last four to six years. This helps local and state transportation officials plan for larger multi-year construction projects. Between 2009 and 2013, however, Congress resorted to more than thirty short-term patches that extended the existing spending level, ranging from one week to several months. State and local governments slowed up their capital project pipeline because of the funding uncertainty.¹⁶ A five-year bill was passed in late 2015, but Congress kept funding levels mostly flat and resorted to one-off budget gimmicks to plug the trust fund shortfall.

MOVE AWAY FROM THE GAS TAX?

The gas tax is unlikely to be raised any time soon. To cover its payments, the tax would have to nearly double, to about 30 cents per gallon.¹⁷ Gas prices in late 2015 were just over half of what they were in 2012, which could offer an opportunity either to raise the tax or to index it inversely with the direction of gas prices to limit the impact on consumer budgets.¹⁸ Yet few elected policymakers in Washington support a gas tax hike.

The federal government could move away from a user-fee revenue system and pay for transportation infrastructure through the general fund. Although every other rich country has gas taxes, rarely do they dedicate those revenues just to transportation spending.¹⁹ Most U.S. states supplement their gas tax revenue with sales tax or general revenues.²⁰ Nor do gas taxes conform well to the user-pay principle, which was a major reason the gas tax was established. Electric-powered cars wear on roads as much as gas-powered cars do. And trucks wear far more on roads than what they pay in gas costs.²¹ Drawing on the general fund could be justified from a user standpoint; nondrivers and drivers alike benefit from consumer goods trucked in on highways and on the broader economic gains from high-quality infrastructure.

Instead of a gas tax user fee, the country could transition to more accurate user fees—the vehicle miles traveled (VMT) tax or tolls. For a VMT system, drivers would install a mileage counter and pay a tax per mile driven. VMT pilot programs with several thousand volunteer drivers are under way in Oregon and Washington. Some Americans, however, may not feel comfortable with electronic devices in their cars reporting their driving stats to the government. Tolling has become more common. Since 2011, toll roads have expanded twice as fast as regular roads.²² Modern tolling is all electronic and without traffic-clogging toll booth plazas. Polls suggest Americans prefer tolls when given the choice alongside increasing gas or sales taxes, and tolling is more common in peer countries.²³ Yet still only 5 percent of total national transportation revenues come from tolls, and if tolls are steadily expanded, public opinion might shift.²⁴ Transitioning to a VMT or tolls as a major funding stream would take at least a generation. There needs to be a more intermediate financing fix.

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Failing U.S. Transportation Infrastructure

Running Low



United States vs. G7

The rest of the G7 spends more of its GDP on transportation infrastructure than the United States.

 **\$103**
2012 actual capital spending, in billions

 **\$85–\$109**
Recommended spending, maintenance

 **\$151–\$177**
Recommended spending, improvement

To improve and expand its infrastructure, the United States should be spending more.

SPEND ONLY AS MUCH AS GAS TAXES RAISE IN REVENUE?

The federal government could only spend as much as it collects in gas tax revenue, which would cause federal funding of highways to fall by one-third and transit by two-thirds. With less funding, the federal government would have a smaller role in transportation policy, focusing only on large-scale projects that cross state boundaries or projects of national significance. Washington's role in surface transportation could, for example, mimic its current role in aviation—where the overall federal funding share is much smaller and responsibilities more narrowly focused on safety regulations and air traffic control coordination.

State and local municipalities would have to take up the slack on the funding side. The majority of states have already responded, raising their gas taxes or finding other revenue streams to pay for transportation projects. But these revenue hikes are unlikely to fill the entire gap and extremely unlikely to raise overall national spending to improve and expand capacity. According to one analysis, even with recent state revenue increases, if the federal government cut spending to the level of gas tax revenues, states would only be able to cover 60 percent of those cuts from their own resources.²⁵ The adjustment may be easier in states that rely less on federal funding. For states such as Virginia, South Carolina, and Rhode Island that get more than 80 percent of their funding from the federal government, the cuts could be devastating. The federal government could help by bringing back tax subsidy programs on municipal debt, like the Build America Bonds program, which lasted only from 2009 to 2010 but helped raise \$181 billion and gave states and local municipalities a generous 35 percent subsidy on interest payments. But state and local tax relief is not a costless solution for federal taxpayers, because federal tax revenue would drop.

A LARGER PRIVATE ROLE?

If the public sector is taking a step back, a larger role could be given to the private sector. Politicians across the political spectrum have endorsed using more public-private partnerships to finance and manage infrastructure projects. P3s are still rare in the overall context of U.S. infrastructure investment. In the past decade, though, they have become more common, and most large-scale new capital construction, such as the I-70 East highway in Colorado or the LBJ expressway in Texas,

involves P3s. States have been tweaking their laws so that now a majority of states allow P3 contracts for public infrastructure.

P3 projects tend to be expensive and complex—when private expertise can come in handy—and have an immediate revenue stream, either from user tolls or government payments. The contracts themselves, stipulating the private party's role, can take a variety of forms. Some, such as the Indiana Toll Road or Chicago Skyway, are “concession” agreements where the state sold ownership for a lump-sum payment. Others, such as the I-595 repairs in Florida, have “availability payment” agreements under which a private developer finances the capital and operating costs of the facility but the government retains ownership and pays the developer an annual fee. Analysis of the relatively small number of completed P3 projects suggests that they are completed slightly more on budget and on time compared with those carried out exclusively by the public sector.²⁶

The federal government has long been trying to encourage P3s. Loan programs and tax relief programs, many of which were created under the Bill Clinton and George W. Bush administrations, have been expanded and the terms made more generous. The largest loan program, the Transportation Infrastructure Finance and Innovation Act (TIFIA), provides federal credit assistance (e.g., direct loans, loan guarantees, flexible terms, low interest rates) to leverage private capital and finance large-scale P3 surface transportation projects. The program has been largely successful. Only two of forty TIFIA loans initiated so far have defaulted. The loans are being paid back, meaning that the program has not actually cost the government or taxpayers much money. Qualified Private Activity Bonds have existed for transportation projects since 2005, enabling state and local governments to take out tax-exempt bonds for P3 projects. Federal restrictions on the tolling of interstate highways have been scaled back. Additionally, a new office within the Department of Transportation was created in 2014 to help states and local governments, which often have no P3 expertise, write P3 laws and navigate P3 contracts.

President Obama and some Democratic members of Congress have favored creating an “infrastructure bank.” Like TIFIA, it would supply federal credit assistance and loan guarantees to finance large-scale, interstate, and multimodal projects with leveraged private capital. An initial federal infusion of \$10 billion could raise \$100 billion to \$200 billion from capital markets. Unlike TIFIA, the bank would finance all

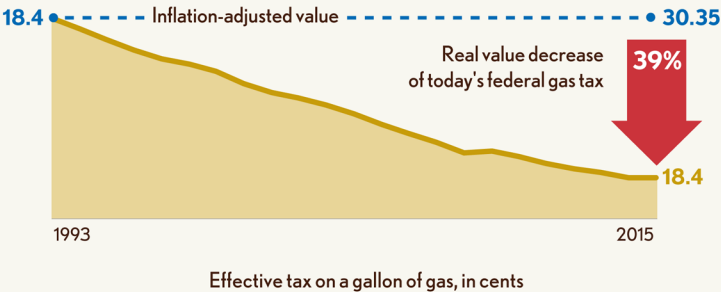


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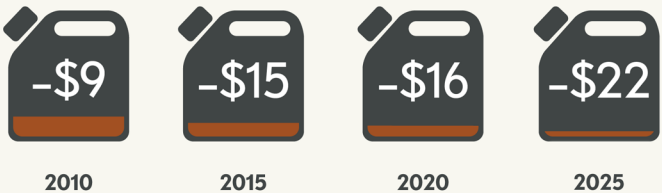


Failing U.S. Transportation Infrastructure

Out of Gas



The real value of today's federal gas tax is far below what it was twenty years ago.



Annual deficit in the highway and transit trust fund, in billions

The trust fund deficit is getting worse.

infrastructure projects, from transportation to water, energy, and technology. It would also make it easier to compare the benefits and costs of projects in a competitive selection process. The bank would be an independent entity with an independent board, free from the political grip of Congress and the Department of Transportation.

The idea has not gained political traction, however. Skeptics question whether the solution to the country's infrastructure woes is yet another government institution. It could take years to organize and get it up and running, and finding an extra \$10 billion in the federal budget would require difficult negotiations. If the bank were a purely lending institution, they argue, why not instead expand existing federal lending programs like TIFIA? Or the federal government could provide more support for the thirty-two states that already have state infrastructure banks.

THE LIMITS OF PRIVATE FINANCE

Private finance is unlikely to be a substantial source of new transportation funding, however. P3 projects in the United States have so far brought small sums of money to the table; over the past twenty-five years, private finance has accounted for \$24 billion, or roughly 0.5 percent of the \$4 trillion total the country spent on highways.²⁷ Most P3 contracts are for managing and operating infrastructure, not financing it. And most private partners are paid by state and local governments from general funds.

To be sure, private dollars for infrastructure projects are trending up. Two-thirds of that private money has come in just over the last five years. Infrastructure could be a smart investment for pension or sovereign wealth funds that are looking for relatively safe assets that provide long-term steady returns. In the last ten years, global infrastructure investment funds have raised roughly \$300 billion for projects.²⁸ Although one-third of that money came from the United States, nearly all of it was invested in Europe, Canada, or Australia.²⁹ New financing tools are being proposed in Washington. President Obama has pledged to create a new kind of tax-exempt loan for P3 infrastructure projects—called Qualified Public Infrastructure Bonds (QPIBs)—where the private partner would pay the same low interest rate that a public entity would. Another idea from Senators Ron Wyden (D-OR) and John Hoeven (R-ND), called Move America Bonds, would go further,

allowing private entities to claim a tax credit for work on property that is not government owned.

But taxpayers may not actually save much money with P3s, aside from small efficiency gains in project delivery. Financiers get involved to make money, in the form of either user tolls or tax revenue. The TIFIA loan portfolio is entirely made up of tolled facilities to repay the loan. Yet widespread toll use may hit up against public opinion. Public opposition to tolling nearly killed the Colorado I-70 East expansion. Texas embraced tolls with a zeal in the 2000s, but now Republican lawmakers are pulling back because of a grassroots campaign against tolls.³⁰ The trucking industry is lobbying hard against more tolls. Private money can be useful for getting an alternative initial capital source if, for example, federal dollars are delayed. Eventually, though, Americans will have to pay it back. And when all relevant costs are taken into account, private finance is no less costly for the taxpayer than public finance.³¹

Private financing only works for projects that have a high enough rate of return on investment. Congestion-relief projects, which offer a steady flow of traffic, are ideal. Private finance is a big player in high occupancy/toll lanes that are either in operation or being planned in most major metropolitan areas. The vast majority of road or highway projects cannot deliver as high a rate of return. Even in Canada, which has been engaging with P3s for decades and has the expertise to execute, P3s still make up no more than 10 percent of all projects.³² TIFIA actually has more for loans available than there are viable P3 projects that have a high enough rate of return or an immediate revenue source like tolls. In 2014, 64 percent of the \$1 billion apportioned to TIFIA went untaken.³³

Transportation infrastructure is a public good, and public dollars need to make up the lion's share of the investment gap. Ultimately, the American public will simply have to spend more to pay for infrastructure.

PUBLIC OPINION: WILLING TO PAY MORE WHEN FRAMED IN SPECIFICS

When asked in broad terms, Americans favor increasing national infrastructure investment. When given a list of federal budget priorities, roads and infrastructure follow closely behind education and entitlements.³⁴ A majority say reducing traffic and maintaining roads should be a “high priority,” and two-thirds say funding infrastructure is either extremely or

very important.³⁵ Yet, when asked in broad terms, Americans, in similar margins, reject raising the gas tax, installing more tolls, or using a miles-driven tax.³⁶

Americans appear to be more willing to pay, however, when they know their money is going to be spent on a specific project or closer to home.³⁷ In recent years, state and local ballot initiatives supporting increased investment have had a stellar success rate, many of them asking voters to increase their own gas and sales taxes.³⁸ More transparency in how federal money is spent locally might help generate wider support for increasing federal revenues for transportation.³⁹ Getting rid of old funding formulas in favor of a more competitive process could help as well.

MAKING MORE STRATEGIC INVESTMENTS

If the federal government invests less in infrastructure in the next few decades, at least it could be more efficient and strategic about where it invests, targeting scarce money where the needs are greatest.⁴⁰ Roughly 90 percent of federal highway and transit funding is distributed based on a formula that is partly the result of political negotiation and partly based on the amount of gas tax receipts from each state. How the money is spent is almost entirely up to the political bodies in state and local governments, and does not necessarily require a careful and transparent cost-benefit analysis by an independent body. Rarely does a federal follow-up assessment evaluate how the formula-based money was spent. Because the federal government is the source for nearly half of state and local capital spending, it could use the money to hold those governments accountable for their investment decisions.

The federal government has taken a few initial steps in the right direction. The stimulus package created a competitive grant program that forced states to compete for funding, requiring states to defend their project submissions and to rank priorities. The 2012 highway bill, called MAP-21, consolidated highway programs and sped up the project planning process by allowing agencies to conduct regulatory reviews concurrently. It also directed federal bureaucrats to design highway performance metrics that could be used for performance-based spending. Also, for the first time, MAP-21 asked states and metropolitan areas to set highway conditions and performance targets, though the targets are not yet linked to actual funding allocations.⁴¹

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Catching Up

31%

Support 10 cent gas tax increase

71%

Support 10 cent gas tax increase, if used for maintaining roads and highways

59%

Support 10 cent gas tax increase, if it adds modern, technologically advanced systems

In national public opinion polls, Americans are most likely to support a gas tax hike if they know the revenues are going toward a specific goal.



75%

of recent state and local transportation spending ballot initiatives have passed.

Voters tend to support transportation taxing and spending hikes within their own state and local communities.

OTHER COUNTRIES ARE BETTER AT INFRASTRUCTURE FINANCING

Other peer countries are doing a better job at securing funding to pay for multiyear investment plans. In 2013, Canada authorized a giant funding increase in a ten-year infrastructure investment plan, the longest in Canadian history. A similar plan was put in place in the UK in 2010. In both cases, fiscally conservative governments initiated the funding push, even at a time of austerity. Australia and Japan have made some spending cuts in recent years and spending has been flat in Germany, but all make those commitments in multiyear—often five-year—plans.

Others also make more needs-based and strategic investment decisions. The UK, Australia, and Germany all have independent bodies to conduct cost-benefit analysis and rank national priorities for large-scale infrastructure projects. Although the Canadian federal government does distribute most transportation money via a population-based formula, the provinces need to report back how the funded projects delivered national benefits.

Most P3 innovation has been occurring elsewhere as well, with the United States playing catch-up. P3s are far more common in countries such as Australia, Canada, Spain, and France. The UK and Canada have government institutions, such as Infrastructure UK and PPP Canada, to help P3 projects along—institutions that served as the model for a similar office called the Build America Transportation Investment Center in the U.S. Department of Transportation.

FUTURE PROSPECTS

Prospects appear dim for a long-term funding solution that would significantly increase investments in transportation infrastructure. President Obama's budget proposals have consistently called for an increase in transportation funding, most recently by one-third, but Congress has resisted.⁴²

Obama started his presidency championing transportation, yet many of his initiatives have since fallen flat. Infrastructure spending was among the biggest components of the 2009 stimulus package, receiving close to \$100 billion, half of which went to transportation. There was also a new push for high-speed rail that included hefty

funding to back it up. But the idea turned out not to be so practical in a country that has does not have Europe's or Japan's density or China's willingness to stomach huge system costs.⁴³ Congress has since zeroed out funding for the high-speed rail program. And in spite of Obama's attempts to get the country on track to consistently spend more on its transportation system, a flat or downward trajectory is more likely for the next few years.

States and localities can try to levy more taxes, expand public-private partnerships, or seek voter approval for specific projects. Without more transportation dollars available, though, the governments will struggle to deliver a better transportation system.

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